ABSTRACT

The present invention includes first signal set determining means 35 for determining a signal set to be a first signal set when determination by first determining means 33 of a crank angle detecting signal determining means for every one rotation and determination by second determining means 34 of a cam angle detecting signal for every one rotation are performed within a predetermined angle; second signal set determining means 36 for determining a signal set to be a second signal set when determination of a crank angle detecting signal for every one rotation and determination by the second determining means of a cam angle detecting signal corresponding to a cylinder are performed within a predetermined angle, and count reference determining means 37 for determining a cylinder number corresponding to the first or the second signal when signal sets are determined to be the first, the second and the first signal set or the second, the first, and the second signal set sequentially in this order, and also determining a generation point of the present crank angle detecting signal to be a count reference of the crank angle.